UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

CPC PATENT TECHNOLOGIES PTY LTD., Plaintiff, v. APPLE INC., Defendant.	Case No. 6:21-cv-00165-ADA **JURY TRIAL DEMANDED**

DEFENDANT APPLE'S REPLY TO
PLAINTIFF CPC'S CLAIM CONSTRUCTION BRIEF

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I. INTRODUCTION

The Patents-in-Suit disclose and claim very specific biometric security systems. With its constructions CPC runs from its own patents, but to no avail, because in almost every instance the claims themselves recite the limiting terms. The '039 Patent claims a "Biometric Card Pointer System" in which card data is used to define and point to a memory location where biometric data of the card user is also stored. The '208 and '705 Patents claim a verification system that by the express language of the claims requires a number and duration of fingerprint presses to provide multi-tiered access. Apple's proposed constructions are based on the express words used in the claims and are consistent with the clear disclosure of the specification.

In contrast, CPC offers "plain and ordinary meaning" for essentially every proposed construction (except means-plus-function terms). In doing so, CPC ignores the express language of the claims themselves and the unambiguous disclosures in the Patents-in-Suit. CPC seeks to gut the claims of any actual meaning tied to the disclosure of the patents in suit, with the intent of treating each term as an empty vessel into which it can impart whatever broad meaning it likes. Doing so transgresses the clear disclosure in the patents and improperly attempts to recapture basic biometric security features it concedes are prior art.

CPC's proposals for the means-plus-function terms in the '039 and '208 Patents remain egregiously incorrect. For each such term CPC offers a corresponding structure that is the equivalent of "code for performing the function"—a facially deficient proposal. In contrast, Apple identifies those structures specifically linked to the recited function in the specification. To rescue its deficient proposed constructions, CPC points to entire figures as exemplary "algorithm flowcharts," but does not tie specific parts of those figures to its proposed corresponding structure. In many instances, the patents simply fail to disclose any algorithm that performs the recited function. CPC's proposals should be rejected.

II. ARGUMENT

A. '039 Patent

1. "biometric card pointer system" / "biometric card pointer enrolment system" '039 Patent Cls. 1, 13, 19

The '039 Patent expressly states that it is directed to: "arrangements, referred to as a Biometric Card Pointer (BCP) arrangements or systems" that improve on the prior art by "automatically storing a card user's biometric signature in a local memory…at a memory address defined by the ("unique") card information on the user's card." '039 Patent 2:51-67. The term "BCP" is not a term of art in the industry, but is a term coined by the '039 Patent to describe the very unique system set forth in the patent. *See, e.g., Lenovo Holding Co., Inc. v. DoDots Licensing Solutions LLC*, 2021 WL 5822248, at *1-*3 (Fed. Cir. Dec. 8, 2021) (rejecting argument that the coined terms "Networked Information Monitor (NIM) and NIM template" should be afforded their plain and ordinary meaning because the term "has no plain and ordinary meaning" and affirming construction consistent with the passage in the specification that "define[d], generally, what a NIM is.") (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996) ("The specification acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication."). To effectively assign its own definition to a claim term, a patentee does not have to expressly state in the specification that a term is being given its own special definition, so long as the definition is readily apparent from the specification. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1320-21 (Fed. Cir. 2005) ("[R]equiring that any definition of claim language in the specification be express, is inconsistent with our rulings…that the specification 'acts as a dictionary when it expressly defines terms used in the claims or when it defines terms by implication.'") (citing *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996).

Here, the patentee used the descriptive phrase "biometric pointer card system" to describe the disclosed system in which card data points to a memory location where the user's biometric data is stored. The phrase is consistent with the disclosure in the patent and the recited claims. Each asserted independent claim recites a "biometric card pointer system" or a "biometric card pointer enrolment system" that goes on to claim a system in which a user's biometric information is stored in a memory location depending upon the card information. *See, e.g.*, Cl. 1. By storing the card information in a specific location based on its content, the system "points" to that memory location and associates it together with the biometric data. *Id*. This scheme is exactly what is disclosed in the specification and figures. Figure 4 "illustrates the biometric card pointer concept" and specifically shows that "604 card data – points to address of the biometric signature" and that "607 memory address [is] defined by the card data." '039 Patent at FIG. 4; *see also* 7:31-33; Fig. 5; 8:5-34.

Other descriptions are consistent with the requirement that the data on the card or key fob define the memory location together with the biometric data. *See, e.g.*, '039 Patent at 7:43-49 (describing that when "the card user couples their card 601 (or key-fob or other card device) to the card reader," the card data "defines the location 607 in memory 1214 where the unique biometric signature is stored."). This is also consistent with the ***purpose*** of the invention, which is to address cumbersome systems with security issues by creating a system in which the "card user's biometric signature is automatically stored for the first time…at a memory address defined by the ("unique") card information." *See id*. 2:23-44; 62-67. This ***is*** the purported invention of the '039 Patent.

CPC argues it is not enough for a patentee to simply disclose a single embodiment or use a word in the same manner in all embodiments. CPC Resp. Br. at 2. But that is not what the patentee has done here. The patentee ***has*** "clearly express[ed] an intent" to define the term and

has provided that clear definition throughout the patent, as shown above and in Apple's opening brief. *See* Apple Op. Br. at IV. A. 1; *Helmsderfer v. Bobrick Washroom Equip., Inc.*, 527 F.3d 1379, 1381 (Fed. Cir. 2008). And as Apple pointed out in its opening brief, there is ***no other definition*** of the "biometric card pointer system" in the '039 Patent, nor does CPC make any attempt to provide one.

Interestingly, CPC admits that the biometric card pointer system is a system in which card data is used to point to a memory location where biometric data of the card user is stored, but argues this is the plain and ordinary meaning of the phrase. CPC Resp. Br. at 3. But CPC fails to acknowledge that without the context of the '039 Patent, a person of ordinary skill in the art could not understand what is meant by "biometric card pointer system" because the phrase itself doesn't explain what is pointing or being pointed to, or how the "biometric" and "card" are associated. In fact, read outside the context of the '039 Patent, a "biometric card" would connote to the public that it is the card that stores the user's biometrics. CPC's attempt to override the clear intent of the patentee in defining the phrase "biometric card pointer system" should be rejected, and Apple's proposed construction should be adopted.

2. "means for defining, dependent upon the received card information, a memory location in a local memory external to the card" '039 Patent Cl. 13

The '039 Patent fails to disclose any structure that performs the claimed function of "defining, dependent upon the received card information, a memory location in a local memory external to the card." This language reflects the core feature of the BCP system, in which card data is used to define in local memory where to store a biometric signature. The location, as the claim explicitly states, is dependent upon the user's card information. But the patent fails to disclose any specialized hardware or algorithm that performs this function. The '039 Patent repeatedly describes the card data as defining the memory location where the user's biometric data

is stored, but data by itself ***does*** nothing and cannot be corresponding structure. The patent fails to describe ***what*** performs the "defining." That is, the '039 Patent does not disclose how the system detects or uses the card information to define the memory location to store the biometric data.

CPC's proposed structure is legally deficient and highlights the lack of supporting structure. It points to "a computer system with a processor executing a biometric card pointer (BCP) application stored in memory and all equivalents thereto." Apple Op. Br. at 11. CPC concedes that an algorithm is required to support its proposed structure, but then vaguely points to two ***entire*** figures—Figures 3 and 4—in support of its construction. CPC Resp. Br. at 5-6. CPC does not state whether both figures are the proposed structure, or whether some step within the flowchart is the proposed structure. Further, of the two figures CPC points to, only Figure 4 is identified in CPC's proposed construction. CPC's proposal should be rejected for this reason alone, but also for two additional reasons.

First, CPC's proposal fails to identify specific disclosure in the specification that is linked to the claimed function. Instead, it identifies "a biometric card pointer (BCP) application." But the patent provides no clear definition for a BCP application. Also, a BCP application is not a term of art or known software and doesn't represent an identifiable algorithm. Rather, it is the focus of the '039 Patent and ostensibly encompasses a large amount of the '039's disclosure. The result is that CPC's proposed structure is functional in nature, something strictly forbidden by the Federal Circuit. *Aristocrat Techs. Aus. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1333 (Fed. Cir. 2008) ("The point of the requirement that the patentee disclose particular structure in the specification and that the scope of the patent claims be limited to that structure and its equivalents is to avoid pure functional claiming.").

As a result, CPC has not shown ***any*** link between the algorithm flowcharts in its brief and the function. While an algorithm in a flowchart can be structure, the specification must "clearly [link] the function…to the algorithm flowchart." *Sony Corp. v. Iancu,* 924 F.3d 1235, 1240 (Fed. Cir. 2019). CPC vaguely points to Figures 3 and 4, but fails to explain what part of the figure discloses the relevant algorithm or what part of the specification links the flowchart to the function of "defining, dependent upon the received card information, a memory location external to the card." CPC Resp. Br. at 6-7. In fact, CPC cites no description of the figures from the specification at all (other than that which is in Apple's brief), much less one that would offer a link between Figures 3 and 4 and the claimed "defining" function. *Id*. That is because there is none. CPC's attempt to waive away the requirement of *Sony Corp.* that the specification link the function and the algorithmic flowchart by vaguely referencing two entire figures should be rejected. The term should be found indefinite for lack of corresponding structure.

3. "means for determining if the defined memory location is unoccupied" '039 Patent Cl. 13

The parties now agree on the proposed structure for this term.

4. "means for storing, if the memory location is unoccupied, the biometric signature at the defined memory location" '039 Patent Cl. 13

Claim 13 of the '039 Patent recites "means for storing, if the memory location is unoccupied, the biometric signature at the defined memory location." Apple's proposed structure, "a processor unit 105 running software process 401 and storage device 109," is tethered to the description of this function in the specification. The '039 Patent specifically states that "a step 401 stores the biometric signature received by the step 203 in the memory 124 at a memory address defined by the card data 604 received in the step 202 of FIG 5." '039 Patent at 9:64-67. As shown in Figure 3, it is appropriate to include "storage device 109" as part of the proposed structure

because it is this storage device that interacts with the user interface and processor to use the disclosed BCP system.

Notably, CPC makes no attempt to defend its proposed structure of "a computer system with a processor executing a BCP application stored in memory and all equivalents thereto," which is the same proposed structure CPC offers for every means-plus-function term of the '039 Patent. CPC suggests that Apple's proposed structure is incorrect because "the specification teaches that 'step 401 stores the biometric signature received by the step 203 ***in the memory 124***,' depicted above in Figures 3 and 4." CPC Resp. Br. at 8. But CPC ***does not offer this as a competing structure***. CPC's citation to "a computer system with a processor executing a BCP application stored in memory" fails for the same reason as set forth above.

B. '208 and '705 Patents

1. "being characterized according to/determining/determine at least one of the number of said entries and a duration of each said entry" '208 Patent Cls. 1, 9, 10; '705 Patent Cls. 1, 10, 11, 14, 15, 16, 17

The parties agree that the plain and ordinary meaning of the claim term "at least one of the number of said entries and a duration of each said entry" should apply, but dispute the plain meaning. CPC would have the Court ignore the structure and words in the claim language, and instead rewrite the claim to import an embodiment from the specification. To do so would be error. *Trustees of Columbia Univ. in City of N.Y. v. Symantec Corp.*, 811 F.3d 1359, (Fed. Cir. 2016) ("The patentee cannot rely on its own use of inconsistent and confusing language in the specification to support a broad claim construction which is otherwise foreclosed.").

Apple's proposed construction is based on the express language of the claims. The term itself recognizes that the fingerprint press—or entry of the biometric signal—has two characteristics: (1) a certain number of times it is pressed; and (2) a certain duration. Specifically, the claims recite that the entries of the biometric signal to create a biometric signature are

characterized "according to at least one of the number of said entries ***and*** a duration of each said entry." The patentee chose to use the word "and" instead of "or," meaning it must be characterized by ***both***. *SuperGuide Corp v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 886 (Fed. Cir. 2004) ("The phrase 'at least one of' precedes a series of categories of criteria, and the patentee used the term 'and' to separate the categories of criteria, which connotes a conjunctive list. …Therefore, the district court correctly interpreted this phrase as requiring that the user select at least one value for each category.").

This is consistent with the description of how biometric signals are entered to create a biometric signature. The system grants access "by providing a succession of finger presses to the biometric sensor 121, providing that the success presses are of the appropriate duration, the appropriate quantity, and are input within a predetermined time." '208 Patent at 10:45-49. As an example, the system can "[e]nrol [*sic*] an ordinary user' —> dit, dit, dit, dah where 'dit' is a finger press of one second's duration and 'dah' is a finger press of two second's duration." *Id*. at 10:57-63. As this example shows, the system uses a specific number of finger presses ***and*** the duration of those finger presses in a specific pattern to provide a certain type of access.

CPC argues that by pointing to this passage, Apple is attempting to import a limitation into the specification. CPC Resp. Br. at 9-10. Not only is this untrue, it is CPC that improperly tries to rewrite the claim. CPC seeks to change the word "and" to the word "or" within the claim language. *Id*. CPC relies on a single embodiment in the specification in which "the control information is encoded by ***either or both*** (a) the number of finger presses and (b) the relative duration of the finger presses," but in doing so, it is CPC that ignores the plain language of the claims, which control. The Federal Circuit has already determined that the plain language of a

term that uses "at least one of…" together with "and" "requires that the user select at least one value for each category." *SuperGuide*, 358 F.3d at 886. CPC's proposal should be rejected.

2. "biometric signal" '208 Patent Cls. 1, 2, 9, 10; '705 Patent Cls. 1, 2, 10, 11, 23, 14, 15, 16, 17

The parties now agree on this construction.

3. "biometric signature" '208 Patent Cls. 1, 9, 11; '705 Patent Cls. 1, 11, 12, 14, 15, 17

Apple's proposed construction for "biometric signature" is consistent with the alleged invention in the '208 and '705 Patents. The term "biometric signature" cannot be viewed in a vacuum, devoid of the context of the other claim terms and the specification. Rather, when looking at this term, together with this Terms, 1, 4, and the specification of the '208 and '705 Patents, it is clear that the "biometric signature" must contain something more than just the biometric signal. It also contains the data relating to the number of entries and the duration of those entries.

Throughout the'208 and '705 Patents, the patentee describes the biometric signature as the biometric signal of the user together with data about the number of times the user entered their biometric signal and for how long. *See, e.g.*, '208 Patent at Abstract, 5:61-65, 12:1-7. Claim 1 describes populating the database of biometric signature by "receiving a series of the biometric signal, said series being characterized according to at least one of the number of said entries and a duration of each said entry." '208 Patent Cl. 1. As this shows, the biometric signature is created by receiving the biometric signal, together with the number and duration of those entries, which create the "database of biometric signatures." *Id*. Apple's proposal clarifies this.

CPC argues that Apple conflates "biometric signal" and "biometric signature" by requiring the biometric signature to include the biometric signal. CPC states that the claims do not require storage of the biometric signal (CPC Resp. Br. at 11), but this is incorrect. *See, e.g.*, '208 Patent at 13:16-19 ("If a further simple signature is to be stored, then the process 800 proceeds by a YES

arrow to the step 807 that ***stores the biometric signal*** as a further ordinary ***signature***.") (emphasis added). This argument also ignores the other half of Apple's proposed construction. Apple is not simply arguing that the biometric signature is a stored biometric signal, but rather that it is the biometric signal stored together with the other data required by the system.

CPC also argues that Apple's proposed construction is somehow limited to the duress attribute, but Apple's proposed construction is not constricted in that way, as the number and duration of entries of the biometric signal can create a variety of biometric signatures and offer many different types of access. *E.g., id.* at 8:15-28. The duress signal in Figure 7 is merely an example. Further, the last paragraph of CPC's response on this term support's Apple's construction. CPC states that the "prior art distinction expressly pertains to 'receiving' and 'mapping' the biometric ***signals.***" CPC Resp. Br. at 13. Apple agrees but disagrees that this passage is not helpful in defining "biometric signature." In fact, the patentee is explaining how the "claimed system populates the ***signature*** database." Apple Op. Br. at Ex. 4, p. 13. Because Apple's proposed construction clarifies the difference between "biometric signal" and "biometric signature" in a necessary way to understand the claims, Apple's proposed construction should be adopted.

4. "accessibility attribute" '208 Patent Cls. 1, 9, 10; '705 Patent Cls. 1, 10, 11, 14, 15, 16, 17

"[A]ccessibility attribute" is a coined term used by the patentee and specifically defined in the '208 and '705 Patents as the item that "establishes whether and under what conditions access to the controlled item 111 should be granted to the user." '208 Patent at 8:15-28. Not only do the patents provide this definition, they are consistent with every description of the invention throughout the specification and the claims, which is a system that provides for different types of

access. Specifically, the examples provided in the sentence directly following the definition of "accessibility attribute" are various types of access:

> [T]he accessibility attribute may comprise one or more of an access attribute (granting unconditional access), a duress attribute (granting access but with activation of an alert tone to advise authorities of the duress situation), an alert attribute (sounding a chime indicating that an unauthorized, but not necessarily hostile, person is seeking access), and telemetry attribute, which represents a communication channel for communicating state information for the transmitter sub-system to the receiver sub-system such as a "low battery" condition.

'208 Patent at 8:15-28. Each of these is a type of access that is defined by both (1) whether to grant access, and (2) under what conditions.

CPC argues for plain and ordinary meaning but fails to confront the fact that this is not a term that can be given its ordinary meaning because the patentee "acted as his own lexicographer clearly set forth a different definition." *3M Innovative Properties Co. v. Avery Dennison Corp.*, 350 F.3d 1365, 1371 (Fed. Cir. 2003). Notably, there are no competing descriptions or embodiments that provide a different meaning for the term "accessibility attribute," nor does CPC offer any. Rather, CPC points to a limitation of claim 5 of the '705 Patent that states conditional access comprises one of "provision of access to the controlled item if the accessibility attribute compromises an access attribute." CPC Resp. Br. at 14. But this example is not inconsistent with Apple's proposed construction. This access attribute, which the patent identifies as "granting unconditional access" ('208 Patent at 8:21), is still an example of "whether and under what conditions access to the controlled item should be granted to a user." In this example, the answer to "whether" to grant access is "yes," and the condition under which to grant access is "no condition." This example fits squarely into the construction offered by Apple. As the term "accessibility attribute" is a coined term clearly defined by the patentee, Apple's proposal should be adopted, and CPC's rejected.

5. "collocated" '705 Patent, Cl. 9

Claim 9 of the '705 Patent recites that the transmitter and receiver subsystem are "collocated" in the electronic computing device. As CPC admits, the term "collocate" does not appear anywhere in the '705 Patent specification. CPC Resp. Br. at 15. However, the specification provides an illuminating example, which is that the PC is "integrated into the receiver sub-system." '705 Patent at 7:22-26, 7:9-13 (describing wired/wireless communication channels). In this context of wired/wireless communication channels, which relate to the transmitter and receiver subsystem, the transmitter and receiver subsystems in the electronic computing device occur in conjunction with one another, because they are integrated with one another. This is the correct definition of "collocated" in the context of the '705 Patent because the systems are not merely placed near one another or side by side, but they work together. CPC argues this proposed construction unduly narrows the term, but it merely provides a clarifying definition that is consistent with a patent that does not explicitly mention the term. Apple's construction should be adopted.

6. Terms Lacking Corresponding Structure

Three means-plus-function terms in the '208 Patent ("means for mapping said series into an instruction," "means for populating the database of biometric signatures," and "means for populating the database according to the instruction") are indefinite for failure to provide a corresponding structure. These limitations relate generally to the process of enrolling the series of biometric signal entries into a database of biometric signatures. According to claims 1 and 9 of the '208 Patent, this enrollment must be done according to some type of "instruction" through a "mapping" process. However, the specification is devoid of any reference to "mapping," "populating" or "instructions," outside the claim language or a verbatim recitation of the claim

language in the specification. Apple Op. Br. at 30-31. The '208 Patent does not describe any code or algorithm that accomplishes this step.

CPC offers the same circular structure for each limitation: "a computer program product having a computer readable medium having a computer program recorded therein, with code for [performing the claimed function]." CPC's proposed structure offers the same purely functional claiming as the means-plus-function terms in the '039 Patent and is similarly legally deficient. *Aristocrat Techs. Aus. Pty Ltd. v. Int'l Game Tech.*, 521 F.3d 1328, 1334 (Fed. Cir. 2008). Simply referencing "a computer that is programmed so that it performs the function" is not enough. *Id*.

In its responsive brief, as it did with the '039 Patent means-plus-function terms, CPC points generally to two entire figures from the '208 and '705 Patents that allegedly serve as "examples" of "an algorithm flowchart with an accompanying description" that CPC argues are sufficient structure. CPC Resp. Br. at 16. This approach does not facially comply with 112 ¶ 6. As with the '039 Patent, these figures are ***not the proposed structure CPC offers***. Nor do these figures describe "mapping" the series into an "instruction," "populating the database of biometric signatures," or doing so "according to the instruction." As CPC's brief admits, process 800 (depicted in Fig. 8) and process 900 (depicted in Fig. 9) provide the overall process for "loading relevant signatures into the database." '208 Patent at 10:19; 13:55-99. But these figures do not provide any specific description of how "mapping" of an "instruction" occurs or how the database is populated "according to an instruction." Importantly, CPC does not point to ***any*** description of these figures in the specification that links them to claimed functions. Nor can it because no such description exists.

7. Remaining Means-Plus-Function Terms of the '208 Patent

Apple's proposal for the nine remaining means-plus-function terms of the '208 Patent is not an attempt to circumvent the Court's Order Governing Proceedings in Patent Cases but rather

an attempt to ensure that the parties' disputes on the means-plus-function terms are resolved because the Court must construe the function and structure as a matter of law. *Medtronic, Inc. v. Adv. Cardio. Sys., Inc.*, 248 F.3d 1303, 1311 (Fed. Cir. 2011). Further, because CPC offers the same, legally deficient construction across all of the means-plus-function terms, the Court can adopt, at an appropriate time, Apple's proposals for the remaining eight terms that are not part of this brief.

As Apple points out, its proposed structures are commensurate with the scope of the function. Using the term "means for ***matching*** the ***biometric signal*** against members of the ***database*** of biometric signatures to thereby ***output*** an accessibility attribute" ('208 Patent, Cls. 1, 9) as an example, require structures that: (1) hold the database of biometric signatures; (2) match them against the biometric signal; and (3) output an accessibility attribute. Apple's proposed structure provides each. The "code entry module 103" allows the user to input their biometric signal, the "database 105" holds the database of biometric signatures, the "executing software 202" matches the biometric signal and outputs an accessibility attribute.

As with the other means-plus-function terms, CPC's proposed constructions suffer from the same problems for the reasons describe *supra* in Section II.B.6. As with the other means-plus-function terms, CPC points generally to algorithms allegedly disclosed in various figures, and then points to an associated description as "specification support" ***but these figures are not the structure CPC proposes***. For every means-plus-function term across the patents-in-suit, CPC seems to be arguing it should be able to point to any software as satisfying the structural requirement, regardless of whether or not it is actually related to the claimed function.

III. CONCLUSION

Apple respectfully requests that the Court adopt its proposed constructions.

Date: December 22, 2021

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to the Federal Rules of Civil Procedure and Local Rule CV-5, I hereby certify that, on December 22, 2021, all counsel of record who have appeared in this case are being served with a copy of the foregoing via the Court's CM/ECF system:

/s/ Seth M. Sproul
Seth M. Sproul